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Kodak

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September 21, 1992

Document Processing Center (TS-790)
Office of Pollution Prevention and Toxics
U. S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Attn: Section 8(e) Coordinator (CAP Agreement)

8EHQ-92-12490

88920010675

INIT

Dear Sir or Madam:

Subject: Report submitted in accordance with guidelines established by the U. S. Environmental Protection Agency Registration and Agreement for the TSCA 8(e) Compliance Audit Program

Report submitted by: Eastman Kodak Company
343 State Street
Rochester, NY 14650
(716) 724-4000
CAP Agreement Identification Number (8ECAP-0039)

The report pertains to 8-quinolinol, 7-C_{12-16}-alkyl derivs. (synonym: 7-tetrapropenyl-8-hydroxyquinoline) [CAS # 68511-63-7] and is being submitted because of lethality observed in an acute aquatic effects study in multiple species and effects observed in a skin irritation study in guinea pigs and rabbits. The aquatic LC_{50} was >5 but less than 50 ppb in *Pimephales promelas, Dugesia tigrina, and Lumbriculus variegatus.* The NOEC for *Pimephales promelas* was 5 ppb in one test and 50 ppb in a second test. The title of the report being submitted is "Basic Environmental Profile for 7-Tetrapropenyl-8-hydroxyquinoline". The test chemical was a strong skin irritant in guinea pigs. The dermal LD_{50} was > 20 mL/kg. A report in our files from Food and Drug Research Laboratories, Inc. indicates that the test compound was severely irritating to rabbit skin. The report is being identified as a study involving other than human effects (Unit II.B.2.b of CAP Agreement).

Questions regarding this submission should be addressed to:
Mr. William Hart, Eastman Kodak Company
Corporate Health and Environment Laboratories
Rochester, NY 14652-3615
(716) 722-5991

Sincerely,

R. Hays Bell

R. Hays Bell, Ph.D., Vice President
Corporate Health, Safety and Environment
(716) 722-5036

3/9/95

RHB:JAF
Enclosure

3

FDRL
FOOD AND DRUG Research LABORATORIES, INC.
WAVERLY DIVISION
Route 17C
P.O. Box 107
Waverly, New York 14892
(607) 565-2931

R E P O R T

Submitted to: General Mills Chemicals, Inc.
2010 East Hennepin Avenue
Minneapolis, Minnesota 55413

Date: August 29, 1978

Laboratory No. 5953b

Sample: Dark brown viscous liquid.

Marking: LIX^R 26; Lot No. 6K 16063

Examination Requested: Primary Skin Irritation ~~Study with Rabbits~~

Purpose: To determine the effects of the test material when applied to the rabbit's skin.

Procedure: The acute skin irritation test was conducted on 6 adult albino rabbits selected from healthy, acclimated animals. The method employed, is patterned after the Draize procedure as described in 16 CFR 1500.41. The back of each animal was shaved free of hair; intact skin was exposed on the left half of the shaved area, and the abraded on the right half. The material (0.5 ml or 0.5 g) was introduced under a square patch of surgical gauze measuring 1 inch x 1 inch. Patches were removed after 24 hours and observations recorded. Observations were again made after 72 hours.

Results: Scoring of the effects produced by the test material is Shown in Table 1. Erythema and edema were observed in the intact and abraded skin of all six animals. These effects persisted throughout the 72-hour observation period.

Conclusion: LIX^R 26; Lot No. 6K 16063 was determined to be severely irritating to the skin of rabbits.

John G. Babish, Ph.D.
Staff Toxicologist
Waverly Research Center

Acc. No.: 337613 TOXICITY REPORT - EASTMAN KODAK COMPANY - HS&HFL HS&HFL No.: 81-332
Chemical: 7-Tetrapropenyl-8-hydroxyquinoline Source Ref. X17069-125-2

Solution	Animals* No. and Species	Route**	Dose Range	Approx. LD_{50}	Symptoms	Time of Death	Wt. Change 2 Wks
Acute Toxicity			mg/kg	mg/kg			
Skin Absorption and Irritation			mL/kg	mL/kg			
Undiluted	3 G.P.	Cuff	5.0-20.0	>20.0	24 hrs: Moderate to gross edema staining and moderate to severe erythema. 1 wk: Thin broken eschar or thin secondary eschar over entire patch, moderate erythema at periphery and slight staining. 2 wk: Scarring, scattered eschars, moderate to almost complete alopecia and slight staining.		+43 +51 +2

*G.P. = Guinea Pig, M = Mouse,
R = Rat, RB = Rabbit
***NRC = No Range Calculable

**PO = Orally, IP = Intraperitoneally,
Cuff = Impervious cuff

Remarks: Strong skin irritation. No evidence of percutaneous absorption.

BC-83-EN34

180167N

ENVIRONMENTAL TEST REPORT

BASIC ENVIRONMENTAL PROFILE FOR:

7-Tetrapropenyl-8-hydroxyquinoline

Biochemistry Section

Health, Safety, and Human Factors Laboratory

July 21, 1983

Revised October 18, 1983

July 21, 1983

Revised October 18, 1983

SUMMARY OF ENVIRONMENTAL TESTING

Compound Name: 7-Tetrapropenyl-8-hydroxyquinoline

The following tests have been run on this compound:

Physical/Chemical

Chemical Oxygen Demand

Biodegradation

Acute Aquatic Effects (seven species)

Secondary Waste Treatment Compatibility

Germination Effects (three species)

Seedling Effects (four species)

The limiting aqueous solubility of this compound was determined to be 6.9 ppm in distilled water and 7.5 ppm in 0.02M phosphate buffer, pH 6.9. However, in preparing solutions for environmental effects testing, concentrations $\geq$2 ppm were not achieved. This compound is readily soluble ($\geq$10%) in DMSO, acetone, corn oil, and octanol. The logarithm of the partition coefficient is estimated to be 5.74, as determined

by a high performance liquid chromatographic procedure. The material has a boiling point of approximately 20°C at 0.25 mm Hg.

Phenol and amine titrations gave purities of 92.8% and 97.4%, respectively. Gas chromatographic analysis detected the presence of 0.5% 8-hydroxyquinoline (Accession No. 900794). Other trace impurities might be: the 5-tetrapropenyl isomer; the 5,7-dialkylated isomer; and the O-alkylated ether.

The COD for this test article is 2.60 g/g. Neither BOD nor TOD values could be obtained because the aqueous solubility of this compound is less than that required for these tests.

A 21-day biodegradation test using an acclimated culture of microorganisms showed a 1.0% evolution of carbon dioxide based on the theoretical maximum.

Two acute aquatic effects tests were performed. In the first test, a stock solution was prepared by continuously elutriating 2.3 g of test article with 23 L of diluent water at a rate of 100 mL/min. for 96 hours. The concentration of the resulting stock test solution was determined to be 500 ppb by UV analysis. Exposure to this solution and a 1/10 dilution caused complete mortality of minnows, flatworms and segmented worms. No significant mortality of daphnids, sideswimmers,

group (1) = LC100

= 500 ppb

(2) group = LC0

See next page gives values for LC10s

snails or pillbugs occurred at these exposures. Ten percent mortality of flatworms was the only observed effect when the seven aquatic organisms were exposed to a 1/100 dilution of the stock test solution. In the second aquatic test three 20 L volumes of diluent water were spiked with 10 mL each of acetone solutions containing 1000 ppm, 100 ppm, and 10 ppm of test article to give test tank nominal concentrations of 500 ppb, 50 ppb, and 5.0 ppb, respectively. The measured concentration of test article in the 500 ppb nominal solution was 1.2 ppm. The other solutions were not analyzed. Daphnid mortality was 90%, at the high exposure concentration and 10% at both the middle and low exposure concentrations. The differing results of these two tests are attributed to the different methods of preparing the test solutions. The elutriation procedure will preferentially dissolve any component(s) of the test article which are more readily soluble in water than the main component. The relatively higher concentration(s) of these minor component(s) in the first test may be responsible for the observed differences in toxicity.

The effect of this test article on secondary waste treatment microorganisms was determined. A stock test solution was prepared by mechanically stirring a mixture of 10 mg of the test article with 100 mL of phosphate buffer. This was then filtered through a 0.45 µm filter. Exposure to a 1/4 dilution of the filtrate caused an 18% inhibition of glucose metabolism by secondary waste treatment

microorganisms. The measured concentration of test article in the filtrate was less than 1.0 ppm.

In a 7-day germination effects test, exposure to a 0.9 ppm solution of the test article did not adversely affect the germination and early growth of ryegrass, radish, and lettuce. In a 7-day seedling effects test, exposure to the filtrate from a 100 ppm suspension of the test chemical caused no statistically significant growth inhibitions in marigold, lettuce, and radish seedlings. The measured concentration of the filtrate was less than 0.2 ppm.

Conclusions

The partition coefficient estimated for this test article indicates a high potential for bioconcentration. The test article is considered to be highly persistent based on the results of the 21-day biodegradation test. This test article has a moderate potential to adversely affect secondary waste treatment microorganisms and a low potential to affect germination and growth of the terrestrial plants. The test article has a high potential to affect some aquatic organisms. The concentration-response relationships for certain aquatic organisms were dependent on the methods used to prepare the test solution. This may have been due to the toxicity of the minor components of the test article. In the test solutions prepared using an elutriation procedure, these minor

components may have been present in relatively larger amounts and responsible for the apparently greater toxicity. Based on the no-effect exposure determined in the first acute aquatic effects test (elutriation procedure), single or intermittent exposures to concentration $\leq$5 ppb of this test article should not cause any adverse environmental effects.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

R. Hays Bell, Ph.D.
Vice President, Corporate Health, Safety, and Environment
Eastman Kodak Company
343 State Street
Rochester, New York 14650

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MAY 0 8 1995

EPA acknowledges the receipt of information submitted by your organization under Section 8(e) of the Toxic Substances Control Act (TSCA). For your reference, copies of the first page(s) of your submission(s) are enclosed and display the TSCA §8(e) Document Control Number (e.g., 8EHQ-00-0000) assigned by EPA to your submission(s). Please cite the assigned 8(e) number when submitting follow-up or supplemental information and **refer to the reverse side of this page for "EPA Information Requests"** .

All TSCA 8(e) submissions are placed in the public files unless confidentiality is claimed according to the procedures outlined in Part X of EPA's TSCA §8(e) policy statement (43 FR 11110, March 16, 1978). Confidential submissions received pursuant to the TSCA §8(e) Compliance Audit Program (CAP) should already contain information supporting confidentiality claims. This information is required and should be submitted if not done so previously. To substantiate claims, submit responses to the questions in the enclosure "Support Information for Confidentiality Claims". This same enclosure is used to support confidentiality claims for non-CAP submissions.

Please address any further correspondence with the Agency related to this TSCA 8(e) submission to:

Document Processing Center (7407)
Attn: TSCA Section 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
Washington, D.C. 20460-0001

EPA looks forward to continued cooperation with your organization in its ongoing efforts to evaluate and manage potential risks posed by chemicals to health and the environment.

Sincerely,

Terry R. O'Bryan

Terry R. O'Bryan
Risk Analysis Branch

Enclosure

12490A

Triage of 8(e) Submissions

Date sent to triage: MAY 0 9 [illegible]

NON-CAP (CAP)

Submission number: 12490A

TSCA Inventory: (Y) N D

Study type (circle appropriate):

Group 1 - Dick Clements (1 copy total)

(ECO) (AQUATO)

Group 2 - Ernie Falke (1 copy total)

(ATOX) SBTOX SEN w/NEUR

Group 3 - Elizabeth Margosches (1 copy each)

STOX CTOX EPI RTOX GTOX

STOX/ONCO CTOX/ONCO IMMUNO CYTO NEUR

Other (FATE, EXPO, MET, etc.): _____

Notes:

THIS IS THE ORIGINAL 8(e) SUBMISSION; PLEASE REFILE AFTER TRIAGE DATABASE ENTRY

For Contractor Use Only

entire document: (0) 1 2 **pages** 1 **pages** 1, 3

Notes:

Contractor reviewer : PPR **Date:** 4/26/95

CECATS\TRIAGE TRACKING DBASE ENTRY FORM

CECATS DATA:
Submission # 8EHQ- 0992 - 12490 SEQ. A

TYPE: (INT.) SUPP FLWP

SUBMITTER NAME: Eastman Kodak Company

SUB. DATE: 09/21/92 OTS DATE: 09/24/92 CSRAD DATE: 03/09/95

INFORMATION REQUESTED: FLWP DATE:
0501 NO INFO REQUESTED
0502 INFO REQUESTED (TECH)
0503 INFO REQUESTED (VOL ACTIONS)
0504 INFO REQUESTED (REPORTING RATIONALE)

DISPOSITION:
(0539) REFER TO CHEMICAL SCREENING
(0578) CAP NOTICE

VOLUNTARY ACTIONS:
(0401) NO ACTION REPORTED
0402 STUDIES PLANNED/UNDERWAY
0403 NOTIFICATION OF WORKER PROTECTION
0404 LABEL/MSDS CHANGES
0405 PROCESS/HANDLING CHANGES
0406 APP/USE DISCONTINUED
0407 PRODUCTION DISCONTINUED
0408 CONFIDENTIAL

CHEMICAL NAME:

CAS#
68511-63-7

INFORMATION TYPE:		P F C
0201	ONCO (HUMAN)	01 02 04
0202	ONCO (ANIMAL)	01 02 04
0203	CELL TRANS (IN VITRO)	01 02 04
0204	MUTA (IN VITRO)	01 02 04
0205	MUTA (IN VIVO)	01 02 04
0206	REPRO/TERATO (HUMAN)	01 02 04
0207	REPRO/TERATO (ANIMAL)	01 02 04
0208	NEURO (HUMAN)	01 02 04
0209	NEURO (ANIMAL)	01 02 04
0210	ACUTE TOX. (HUMAN)	01 02 04
0211	CHR. TOX. (HUMAN)	01 02 04
(0212)	ACUTE TOX. (ANIMAL)	01 02 04
0213	SUB ACUTE TOX (ANIMAL)	01 02 04
0214	SUB CHRONIC TOX (ANIMAL)	01 02 04
0215	CHRONIC TOX (ANIMAL)	01 02 04

INFORMATION TYPE:		P F C
0216	EPI/CLIN	01 02 04
0217	HUMAN EXPOS (PROD CONTAM)	01 02 04
0218	HUMAN EXPOS (ACCIDENTAL)	01 02 04
0219	HUMAN EXPOS (MONITORING)	01 02 04
(0220)	ECO/AQUA TOX	01 02 04
(0221)	ENV. OCCC/REL/FATE	01 02 04
0222	EMER INCI OF ENV CONTAM	01 02 04
0223	RESPONSE RBQEST DELAY	01 02 04
0224	PROD/COMP/CHEM ID	01 02 04
0225	REPORTING RATIONALE	01 02 04
0226	CONFIDENTIAL	01 02 04
0227	ALLERG (HUMAN)	01 02 04
0228	ALLERG (ANIMAL)	01 02 04
0239	METAB/PHARMACO (ANIMAL)	01 02 04
0240	METAB/PHARMACO (HUMAN)	01 02 04

INFORMATION TYPE:		P F C
0241	IMMUNO (ANIMAL)	01 02 04
0242	IMMUNO (HUMAN)	01 02 04
(0243)	CHEM/PHYS PROP	01 02 04
0244	CLASTO (IN VITRO)	01 02 04
0245	CLASTO (ANIMAL)	01 02 04
0246	CLASTO (HUMAN)	01 02 04
0247	DNA DAM/REPAIR	01 02 04
0248	PROD/USE/PROC	01 02 04
0251	MSDS	01 02 04
0299	OTHER	01 02 04

Atox

TRIAGE DATA: NON-CBI INVENTORY
(YES)
CAS SR NO
IN TERMINI

ONGOING REVIEW
YES (DROP/REFER)
NO (CONTINUE)
REFER

SPECIES
GP
RBT
Fish
Daphnids

TOXICOLOGICAL CONCERN:
(LOW)
MED
HIGH

USE:

PRODUCTION:

COMMENTS

-CPSS- 0927952113

0 0 0 0 0 0 0 0 0 0 0 0
> <ID NUMBER>
8(E)-12490A

> <TOX CONCERN>
L/M

> <COMMENT>
ACUTE DERMAL TOXICITY IN GUINEA PIGS IS LOW CONCERN WITH AN LD50 > 20 ML/KG. 3 ANIMALS WERE DOSED WITH BETWEEN 5.0 - 20 ML/KG OF TEST MATERIAL. CLINICAL SYMPTOMS INCLUDED MODERATE TO GROSS EDEMA, STAINING, MODERATE TO SEVERE ERYTHEMA, ESCHAR, SCARRING, AND COMPLETE ALOPECIA.

SKIN IRRITATION IN RABBITS IS MEDIUM CONCERN. WHEN 0.5 ML OF TEST MATERIAL WAS APPLIED TO INTACT AND ABRADED SKIN ERYTHEMA AND EDEMA WAS NOTED IN 6 OUT OF 6 ANIMALS. THE TEST MATERIAL WAS DETERMINED TO BE SEVERELY IRRITATING TO THE SKIN OF RABBITS.

$$$$